

REMARKS

Favorable reconsideration and allowance of this application are requested.

1. Request for Rejoinder

The election of claims 1-8 (Group I) is affirmed by the applicants. Claims 9-15 directed toward patentably distinct inventions non-elected for prosecution herein have been retained in the subject application (but indicated as "withdrawn") so as to preserve the applicants' right to rejoinder with the elected claims on allowance of the same. Thus, rejoinder of claims 9-15 is requested following allowance of elected claims 1-8 since all the of former claims depend directly or indirectly from one of the latter claims.

2. 35 USC §112 Issues

Claim 5 has been amended so as to delete the phrase "wherein the polycondensate is absent. As such, claim 5 is in conformity with the specification and the other pending claims herein.

The ASTM version has been updated in claim 7 to reflect the version that was in effect at the time the priority filing for the subject application was accomplished, namely ASTM D3985-02. The redundant reference to the ASTM measurement standard has been deleted from claim 8. No question of "new matter" has been presented by such amendment. In this regard, the Examiner will appreciate and can take Official Notice of the fact that unless stated to the contrary the most current ASTM standard is what those skilled in the art would be practicing. For this reason, many US patents are granted which do not in fact recite the particular ASTM date version as evidenced for example by USP 6,709,735, 7,241,481 and 7,632,907 (each of which claims generically ASTM D3985 without stating a particular version year).

In view of the above therefore, applicants submit that all presently pending claims are in statutory compliance with 35 USC §112.

3. Response to Substantive Rejections

Prior claims 1-4, 6 and 8 attracted a rejection under 35 USC §102(b) as allegedly anticipated by Cyr et al (USP 6,455,620) while claims 7-8 attracted a rejection under 35 USC §103(a) as allegedly "obvious" and hence unpatentable over Cyr et al. Claim 5 was separately rejected under 35 USC §103(a) as allegedly obvious from the combination of Cyr et al in view of Raff et al (Northwest Science, Vol. 44, no. 3, pp 184-205 (1970)).¹ As will become evident from the following discussion, all pending claims herein are patentably distinguishable over Cyr et al alone or taken with Raff et al.

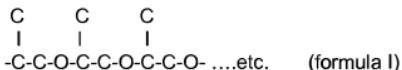
A. Response to 35 USC §102(b) Rejection

A substituted polypropylene oxide is defined by the presently pending claims. In contrast, Cyr et al only refers to unsubstituted polypropylene oxide which is of course vastly different than that claimed herein.

More specifically, pending claim 1 herein defines a composition comprising a specific substituted polypropylene oxide segment, namely polyoxy-1,2-propanediyl. See also in this regard page 2, lines 30-32 of the specification, where it is explained that substituted PPO according to IUPAC nomenclature is polyoxy-1,2-propanediyl.

¹ Although not specifically stated in his rejections of claims 5, 7 and 8, the Examiner has apparently employed the "Examiner's personal experience, University of Tennessee c. 1992" as a basis for his rejection of such claim under 35 USC §103(a). (See page 9, line 10 of the Official Action.) Therefore, since the Examiner's rejection is based *inter alia* on facts within his personal knowledge, applicants respectfully request the Examiner to supply an affidavit as to such facts and to afford the applicants with an opportunity to rebut the same pursuant to 37 CFR § 1.104(d)(2).

The structure of the claimed polymer herein is thus represented by the following formula I:



In stark contrast, the structure of a normal, unsubstituted propylene oxide is represented by the following formula II:



The Examiner alleges that polypropylene glycol is the same as polyoxy-1,2-propanediyl. This conclusion is however erroneous as explained above. In addition, however, the document the Examiner refers to support his allegations actually proves the opposite. In this regard, the examiner refers to EP-1 878 780, page 4, lines 13–14 in support of his position. There however it is said that: "Suitable propylene glycol segmentsare of the substituted type." It is further said that "...this polypropylene glycol" is according to IUPAC nomenclature polyoxy-1,2-propanediyl. The reference to "his polypropylene glycol" in the second sentence clearly points back to substituted one of the first sentence. Only the substituted one therefore is polyoxy-1,2-propanediyl.

In abundance applicants refer to EP-1 878 780, page 4, line 8, which mentions ether segments of copolymers comprising propylene glycol segments, preferably 1,2 – propylene glycol segments. However, at this passage it is also clear that different polypropylene oxides exist and that the 1,2-version is only one of them.

So indeed the polypropylene oxide segment used in the composition according to the applicants' claimed invention is a special one, which is not at all mentioned in Cyr et al. Cyr et al nowhere mentions polyoxy-1,2-propanediyl. On the contrary, Cyr et al even excludes the specific substituted polypropylene oxide as claimed herein, as it

specifically mentions in column 2, lines 51-53, that for C3 polypropylene oxide the unsubstituted version must be used. Moreover, it mentions that polyether selected from the group consisting of unsubstituted poly(alkylene glycol)s having alkylene chains of 1-3 carbon atoms must be used. The species with 3 carbon atoms is the unsubstituted polypropylene oxide, which as discussed above quite different.

For at least these reasons, the presently pending claims herein are novel over Cyr et al. Withdrawal of the rejection advanced under 35 USC §102(b) is therefore in order.

B. Response to 35 USC §103(a) Rejections

The comments above are equally germane to the *unobviousness* of the pending claims over Cyr et al. According to the examiner the claims are not inventive, since he has alleged that discovery of an optimum value of a result effective variable in a known process is ordinary skill in the art (*In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980)).

The Examiner's reliance on *In re Boesch* is however misplaced. Specifically, as noted above, Cyr et al excludes substituted polypropylene oxide. Therefore the presently claimed invention is most certainly not merely an optimization in the subject matter area taught by Cyr et al. On the contrary, the presently claimed invention is an improvement over Cyr et al which is clearly outside the area taught thereby.

Furthermore applicants note that the skilled person reading Cyr et al will recognize that polypropylene oxide is not the leading compound in Cyr. At column 3, lines 29, 30 Cyr et al teaches that the C2 and C4 polyalkylene oxides are preferred – not the C3 polyalkylene oxides. From the comparison of Example 35 and 36, Cyr et al even teaches that polypropylene oxide is less effective (column 19, lines 28 – 31). Cyr et al therefore clearly discourages the use of polypropylene oxide.

Starting from Cyr et al, the ordinarily skilled person must make at least three different steps to arrive at the present invention, namely:

- (1) The skilled person must decide to use polypropylene oxide as the component for starting his experiments;
- (2) The skilled person must decide to change from the unsubstituted polypropylene oxide to the substituted type; and
- (3) Importantly the polymerization of the other monomers must take place in the presence of the polypropylene oxide. Only in that specific case the better results are obtained.

As for (1), the skilled person is discouraged by Cyr to do so as was explained above;

As for (2), Cyr et al specifically excludes this type of polypropylene oxide; and

As for (3), Cyr et al does not teach that the way of making the copolymer might have an influence on the oxygen scavenging properties of the composition. Cyr et al therefore gives no reason to select the specific way of making the copolymer.

Thus, starting from Cyr et al, therefore the skilled person must recognize three important steps as noted above. The first two steps (1) and (2) are in a direction contrary to the teaching of Cyr et al. This only is sufficient to evidence the *unobviousness* of the presently claimed invention over Cyr et al. The last step (3) is a purely coincidental one in view of Cyr et al.

The discussion by the Examiner in the Official Action about spherulites and gas diffusion is not understood. It is nowhere said by applicants that spherulites may play a role. Moreover, gas diffusion is quite different from oxygen scavenging. It is even

questionable if a high or a low diffusion rate is desirable for efficient oxygen scavenging. Therefore, to the extent that such a discussion has played a role in the Examiner's rejection, then it is evidence that the presently claimed invention has been misunderstood. Thus, the applied Raff et al publication does not cure the deficiencies at all with respect to Cyr et al.

Withdrawal of all rejections advanced under 35 USC §103(a) is therefore in order.

5. Fee Authorization

The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Account No. 14-1140.

Respectfully submitted,

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